Ground Water Levels Monitoring
in the Southern Plains Network

Importance / Issues

Groundwater levels are a major natural resource concern for several SOPN parks. Natural disturbance processes such as fire, and human land-use activities (e.g. livestock grazing, agricultural clearing and groundwater pumping) alter watershed conditions and thus indirectly influence aquatic communities. Groundwater overdrafts in the SOPN are a leading anthropogenic stressor that can contribute to the establishment and spread of non-native species like Tamarisk that can alter ecosystem dynamics such as the frequency and severity of fires.

Arkansas River at Bent's Old Fort NHS

Preliminary Monitoring Objective

1. Determine the long-term trends in groundwater quantity levels.

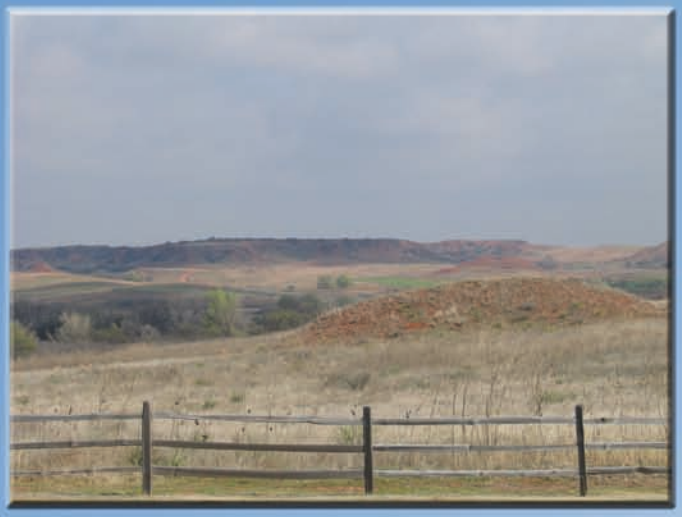
2. Document changes in hydrologic regime associated with hydrological modifications (e.g., dams, diversions) in the SOPN.

Potential Measures

Grassland plant species composition, structure, frequency, percent cover, and more.

Protocol Development & Status

A cooperative agreement has been developed with Texas State University to develop surface water quantity, surface water quality, and ground water quantity monitoring protocols. The planned completion date for the protocol is October 2007.



Mixed-grass Prairie

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